# Defense Life Cycle Management Challenge

## Are we meeting the Challenge?

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Logistics & Materiel Readiness

DAU Annual Acquisition Community Symposium

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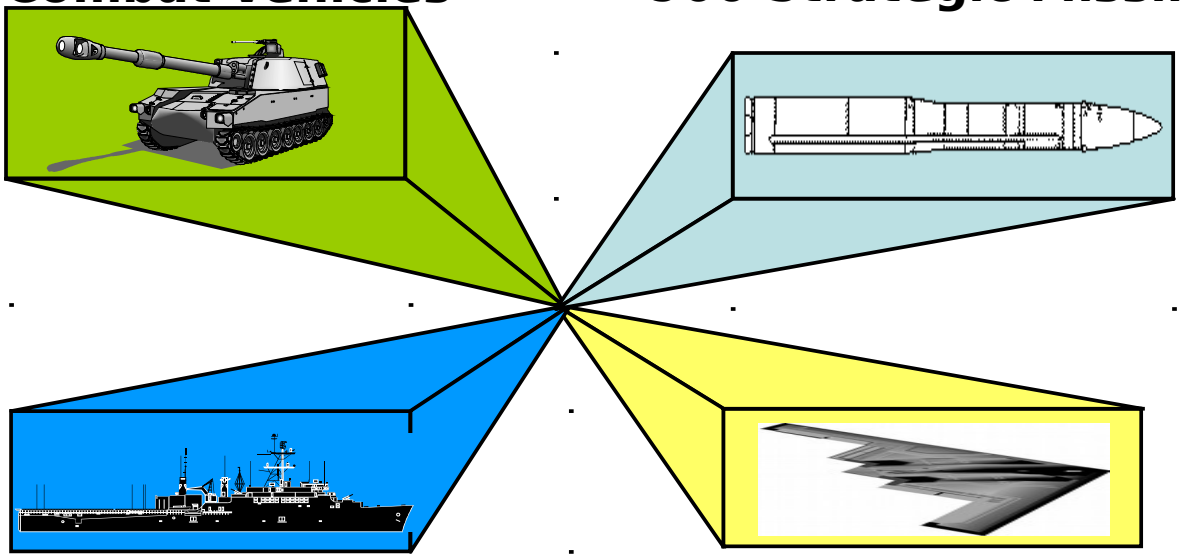
# Why Life Cycle Management ?

~ 30,000 Combat Vehicles

~ 900 Strategic Missiles



~ 280 Ships

~ 14,000 Aircraft/Helicopters

+ ~ 300,000 Tactical Vehicles
+ Communications/Electronics Equipment
+ Support Equipment
+ Other Systems

***Maintained by:***
- ***659,000 DoD personnel***
- ***Private sector companies***

***Maintenance cost:***
***~ $91Billion (FY07)***
- ***$85 Billion inventory***

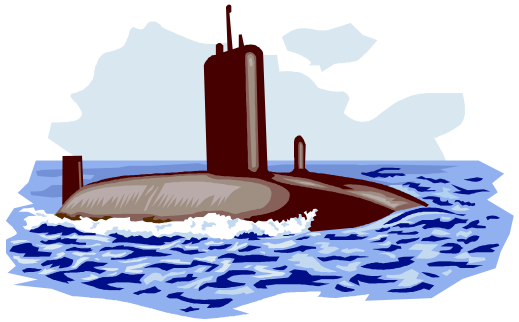
**National Defense PP&E is valued at ~ $700 Billion**

***Are we giving the warfighter …and taxpayer … best value?***

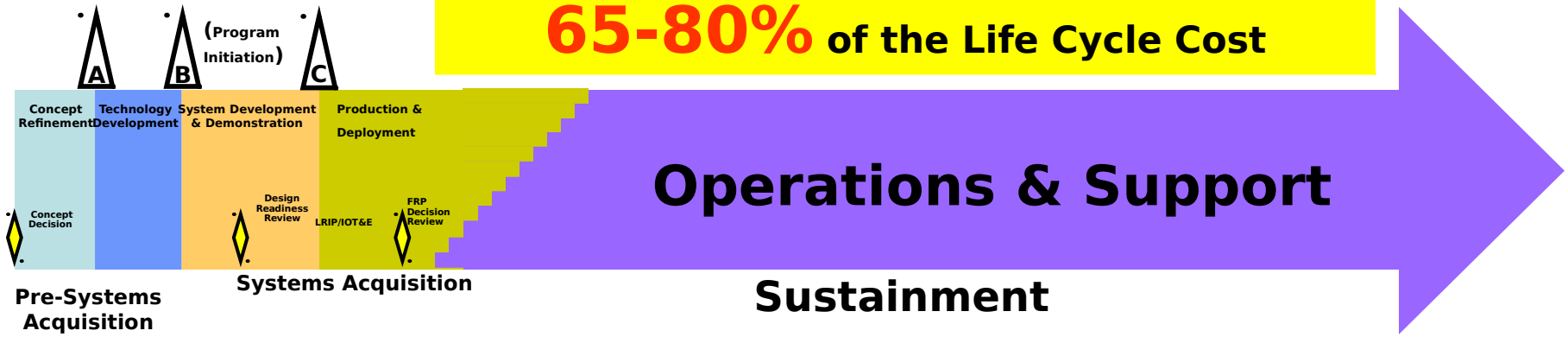
# Life Cycle Management Continuum

**Design For Sustainment**

**Sustain The Design**



**65-80% of the Life Cycle Cost**




**One Set of LCM Metrics Throughout the System Life Cycle**

# New Metrics for Better Life Cycle Capability

**Single KPP:**

- **Materiel Availability**

**Mandatory KSAs:**

- **Materiel Reliability**
- **Ownership Cost**

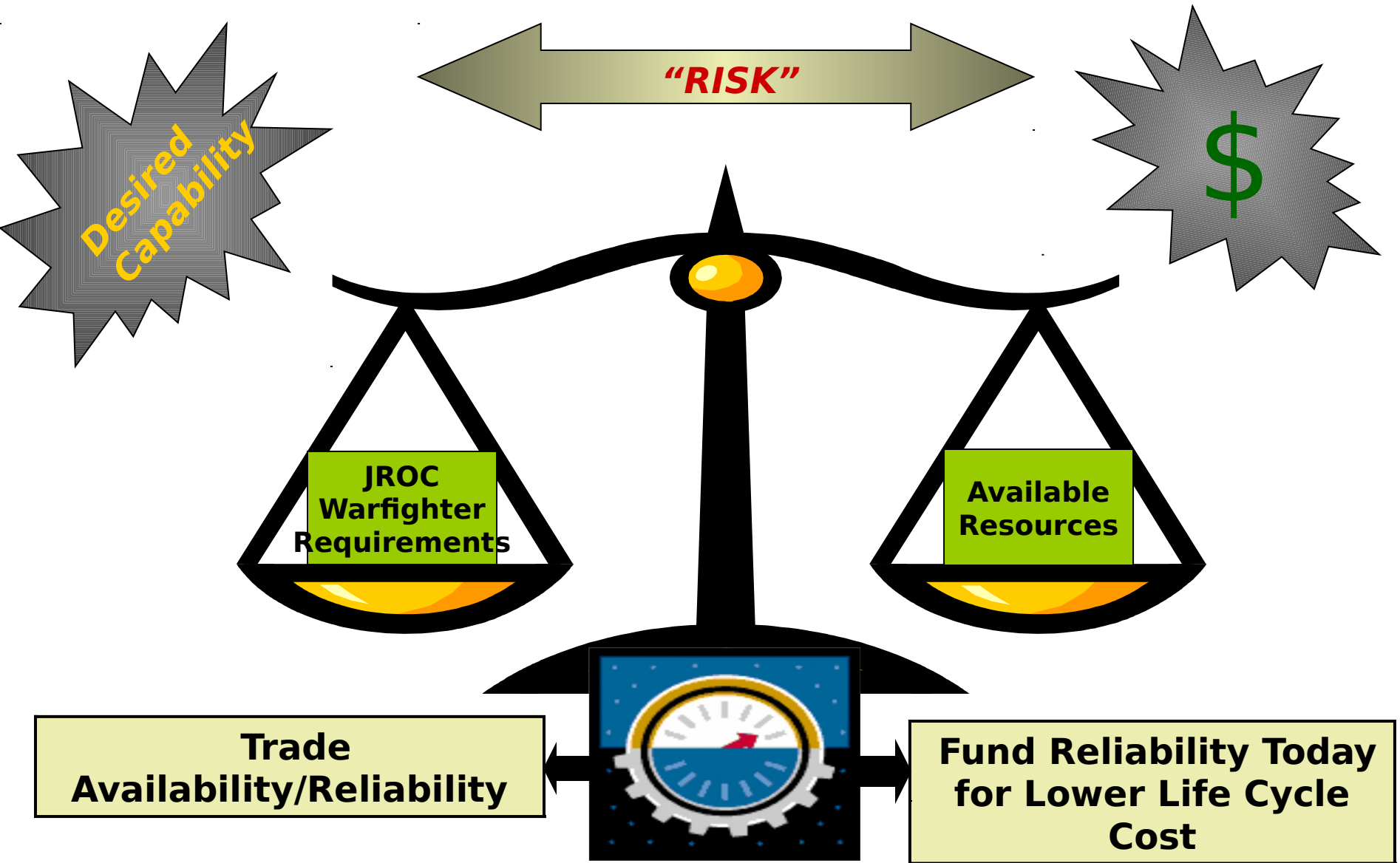
To achieve mission success, Combatant Commander needs:

- Requisite number of operational end items capable of performing the mission when needed
- Confidence that systems will perform the mission and return home safely without failure



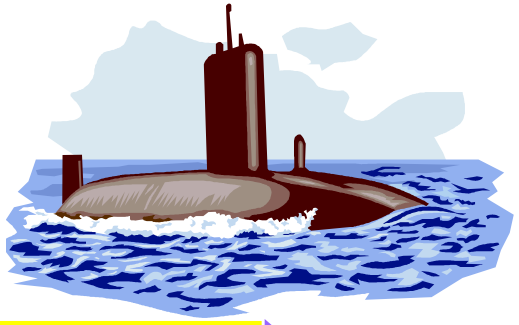
Ownership Cost provides balance, solutions cannot

# The Design/Build Life Cycle Challenge



# Align Metrics, Resources and Outcomes Throughout Life Cycle

**Design For Sustainment** → **Sustain the Design**



**65-80% of the Life Cycle Cost**

(Program Initiation)

A | B | C

Concept Refinement | Technology Development | System Development & Demonstration | Production & Deployment

Concept Decision | Design Readiness Review | LRIP/IOT&E | FRP Decision Review

**Operations & Support**

Pre-Systems Acquisition | Systems Acquisition | Sustainment

CJCSI 3170.01

***National Security Strategy***

***Defense Planning Guidance***

***Strategic Planning Guidance***

KPP **Materiel Availability**

KSA **Materiel Reliability**

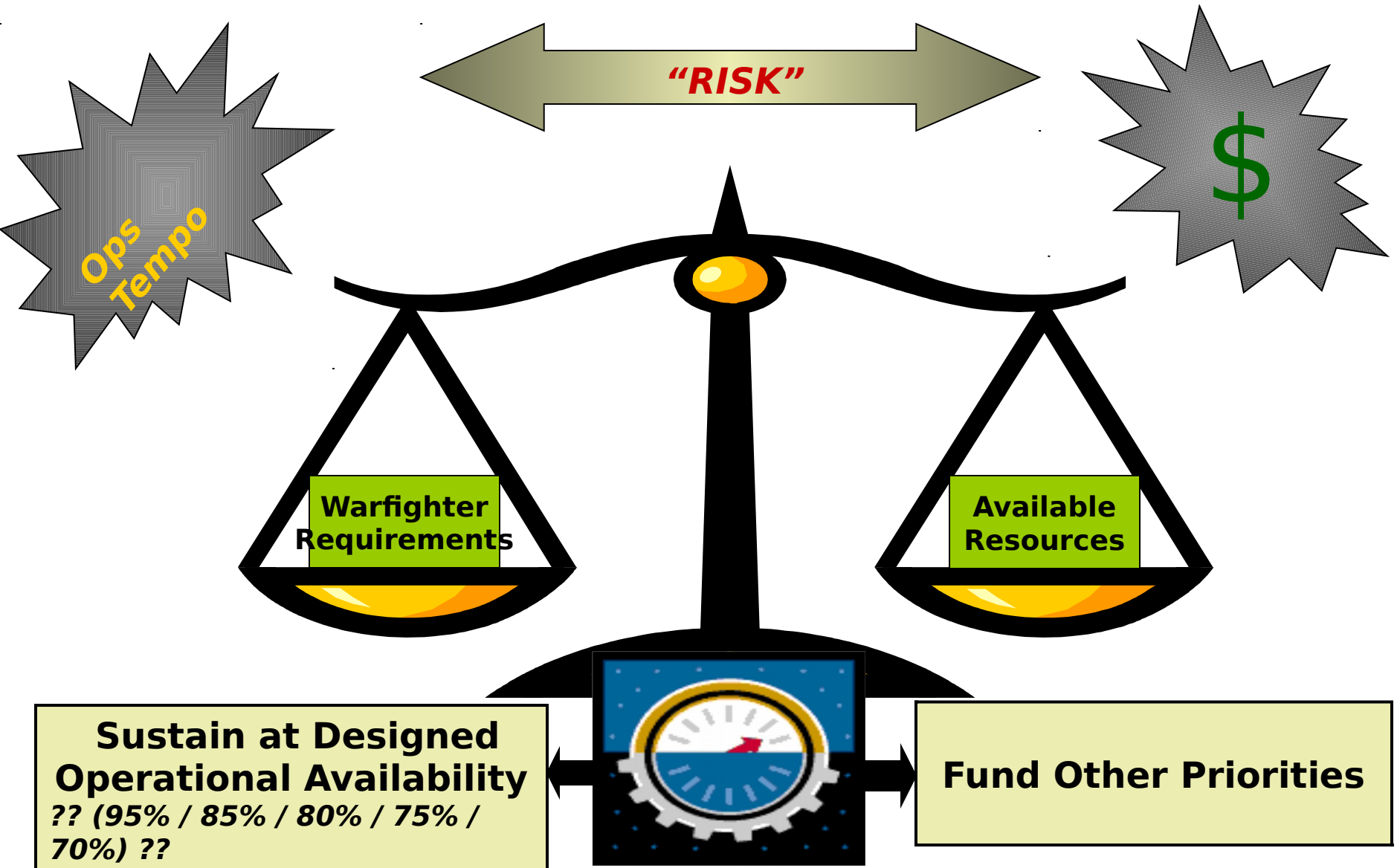
**Ownership Cost**

***Mean Down Time***

Align Resourcing

**Integrate Dollar Resources for LCSM**

# The Life Cycle Sustainment Challenge



# Life Cycle Management

# Enablers

PERFORMANCE BASED

**Materiel**

~~**Availability**~~
**Materiel Reliability**

**Ownership Cost**

***Mean Down Time***

***"Enablers"***

***Corrosion Prevention; IUID/SIM; Technical Data/IETM; CBM + (Prognostics & Diagnostics, RCM); RFID; Continuous Process Improvement (CPI); Title 10 Requirements (50/50, Partnering); Depot Maintenance; DMSMS/Obsolesence; Training; Integrated Supply Chain Management (SCM); Predictive Modeling; Long Term Performance Based Agreements***

**LOGISTICS**

# Performance-Based Logistics: Enabling Life Cycle Sustainment

**INDUSTRY/ORGANIC**

**Product Support Integrator**

**Buys Performance As a Package**

**Weapon System Manager**

**Warfighter/Force Provider**

**Agreement**

**Agreement**

**Ensure System is Sustained at Optimum Level per PBA**

**Provide Continuous Reliable, Affordable Support per PBA**

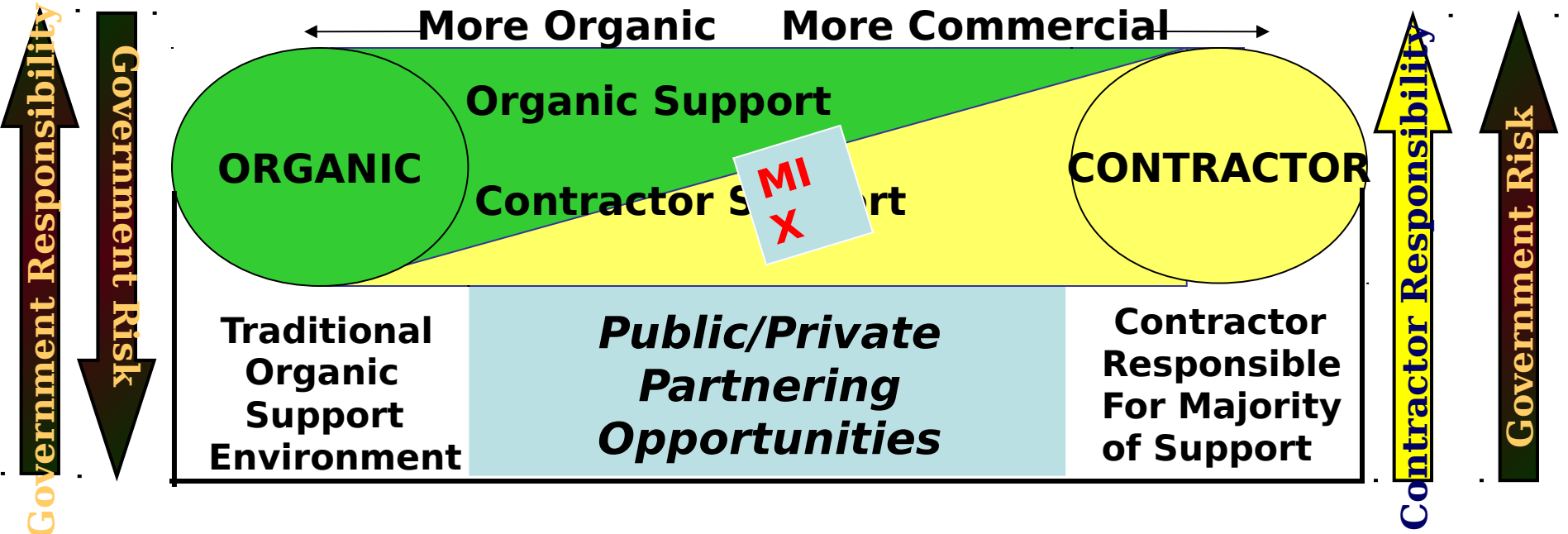
***Acquisition***

***Sustainment***

***Disposal***

***Visibility into cost/risk decisions across life cycle***

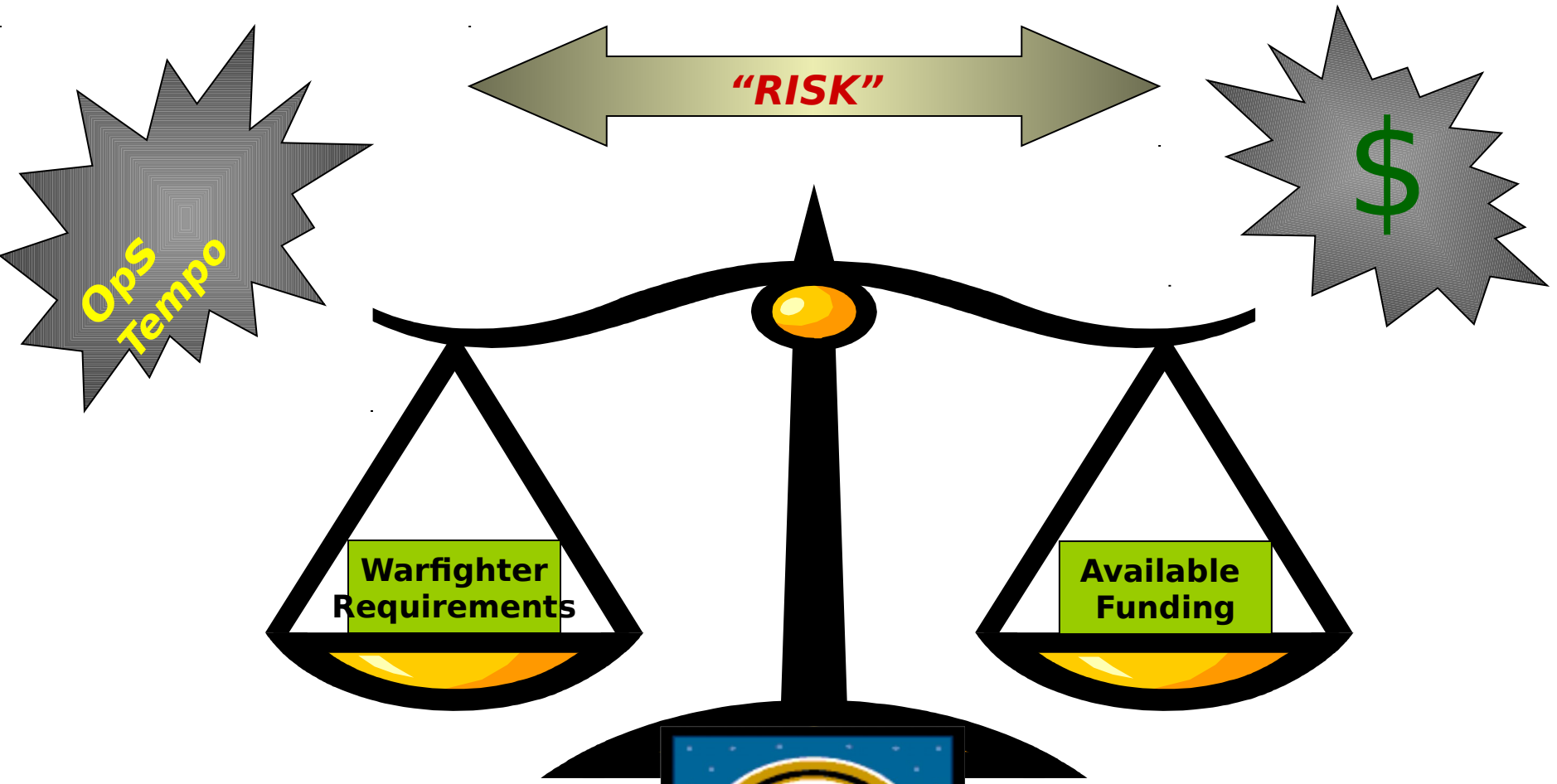
# Spectrum of Support Opportunities




**Few DoD support workloads are "All" organic or "All" contract – it's a M**
**PBL support strategies are no different – only the basis of the agreeme**
**The challenge in developing your strategy is to find that right "mix"**
**based on Business Case Analysis (BCA)**

***PBL is NOT Outsourcing!!***

# The PBL Challenge




**Specified Operational Availability**

***(Organic / Contract /***

**Flexibility**

# The Way Ahead?

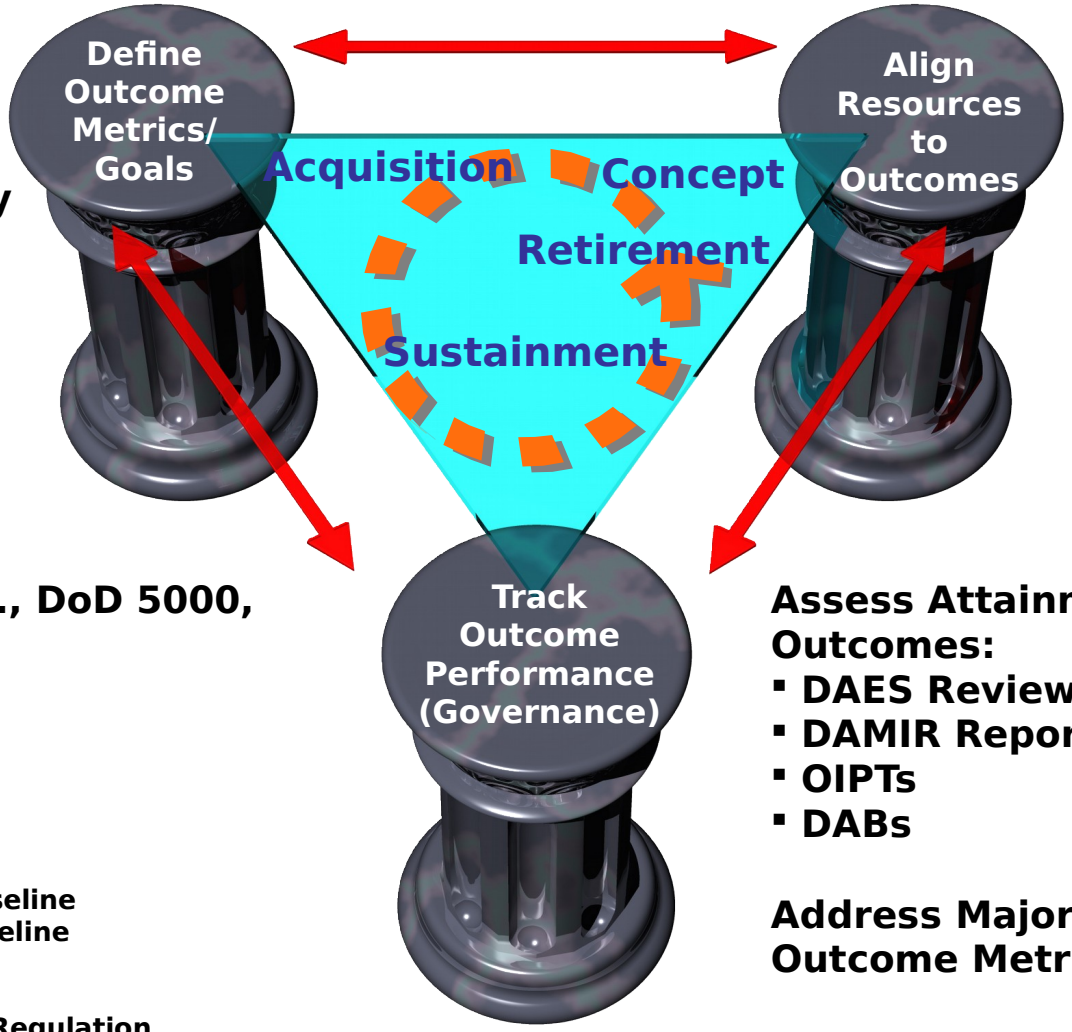
# Life Cycle Management Way Ahead

**Establish Outcomes:**
- **Materiel Availability**
- **Materiel Reliability**
- **Ownership Cost**
- **Mean Down Time**

**Expand APB to LCPB**

**Expand AS to LCS**

**Include in Policy (e.g., DoD 5000, 4151, & CJCSI 3170)**




**Establish Pilot Program to Align Resources to Readiness**

**Create/Use Predictive Modeling Tools**

**Update FMR**

**Assess Attainment of Outcomes:**
- **DAES Reviews**
- **DAMIR Reporting**
- **OIPTs**
- **DABs**

**Address Major Changes in Outcome Metrics (15%/25%)**

**Update LCPB Every 5 Years**

**Note:**
**APB=Acquisition Program Baseline**
**LCPB=Life Cycle Program Baseline**
**AS=Acquisition Strategy**
**LCS=Life Cycle Strategy**
**FMR=Financial Management Regulation**

# We Need Your Help!

***What are Your Answers??***

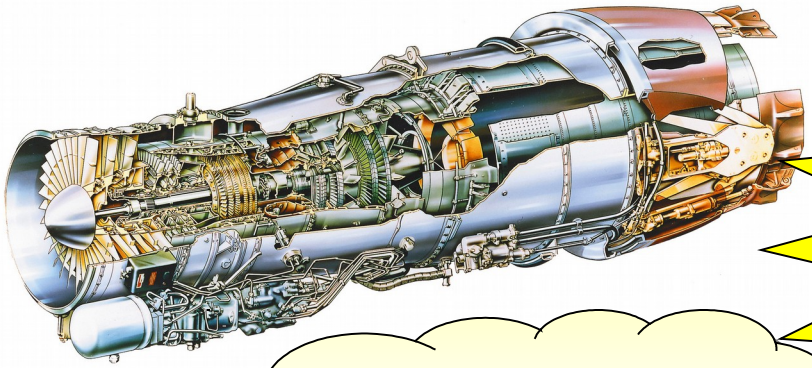
# BACK-UPS

# PBL Example
# T-700 Engine

| | |
|---|---|
| Variant | Engine Repair |
| ACAT | N/A |
| Fleet Density | 438 Repaired YTD |
| Fielded | 1978 |
| Fielding Schedule | N/A |
| Support Strategy | Partnership |

Key Characteristics

| | |
|---|---|
| PSI | **Organic: CCAD (AMCOM)** |
| PSP(s) | **CCAD**<br>**General Electric** |
| Metrics | **1. Reduce Repair Turnaround Time (RTAT)**<br>**2. Increase Time on Wing** |



**GE-CCAD Partnership**

- **RTAT Reduced 69% (from 261 to 76 days)**
- **Time On Wing Increased 260% (from 512 to 825 Hours)**
- **Shaft Horsepower improved 51%**
- **Time-Test-cell yield increased from 40% to 90%**

# PBL Example
# Common Ground Station (CGS)

| | |
|---|---|
| Variant | AN/TSQ-179A(V)2 |
| ACAT | III |
| Fleet Density | 102 |
| Fielded | 2001 |
| Fielding Schedule | Completed |
| Support Strategy | Organic Supply & Maintenance |

Key Characteristics

| | |
|---|---|
| PSI | **Organic: TYAD** |
| PSP(s) | **CECOM**<br>**DLA**<br>**General Dynamics** |
| Metrics | **1. Operational Availability (Ao)**<br>**2. Ownership costs** |

**Performance Rqmt = 75% Ao**

**AMC's Tobyhanna Depot is the PSI**

**AMC-DLA PBA**

**Since implementing PBL, the Ao Rate exceeds 96%**

**Cost Avoidance of $1.8 Million/Year**